

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 2-42				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-13-039			Contract Period   09/11/2013   To   07/31/2016 Base                      Option Period Number       2			Title of Work Assignment/SF Site Name Economic Profile of the Metal				
Contractor ABT ASSOCIATES INC.					Specify Section and paragraph of Contract SOW A.2.2					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   01/04/2016   To   07/31/2016				
Comments: Support for economic analysis of metal finishing industry and screening study of other industries										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
09/11/2013 To 07/31/2016										
This Action:						720				
Total:						720				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name   Ghulam Ali						Branch/Mail Code:				
_____ (Signature)						_____ (Date)				
Project Officer Name   Ahmar Siddiqui						Phone Number   202-566-1004				
_____ (Signature)						_____ (Date)				
Other Agency Official Name						FAX Number:				
_____ (Signature)						_____ (Date)				
Contracting Official Name   Tammy Adams						Branch/Mail Code:				
<b>TAMMY ADAMS</b>						Phone Number: 513-487-2030				
_____ (Signature)						FAX Number: 513-487-2545				

Digitally signed by TAMMY ADAMS  
 DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY  
 ADAMS, dnQualifier=0000018417  
 Date: 2016.01.04 13:28:48 -05'00'

**Performance Work Statement  
EPA Contract No. EP-C-13-039  
Work Assignment # 2-42**

**TITLE: Economic Profile of the Metal Finishing Industry and Screening Study of Industries**

**I. Work Assignment Contracting Officer Representative (WACOR)**

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Office of Science and Technology  
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**II. Level of Effort**

720

**III. Duration**

Date of Issuance to July 31, 2016

**IV. DESCRIPTION**

The Clean Water Act (CWA) directs States, and the U.S. Environmental Protection Agency (US EPA) to develop and implement water quality standards. In addition to establishing water quality standards, the CWA requires EPA to issue technology based limits for the point sources under the effluent guidelines program.

The Engineering and Analysis Division (EAD) is responsible for reviewing existing effluent guidelines annually. EAD assesses all point source categories subject to existing effluent guidelines and pretreatment standards to identify potential candidates for revision, consistent with CWA sections 304(b), 301(d), and 304(g). It also assesses industries consisting of direct discharging facilities not currently subject to effluent guidelines to identify potential candidates for effluent guidelines rulemakings, pursuant to CWA section 304(m)(1)(B). EPA reviews industries consisting entirely or almost entirely of indirect-discharging facilities that are not currently subject to pretreatment standards to identify potential candidates for pretreatment standards development under CWA sections 307(b).

EAD is conducting a preliminary categorical review of the Metal Finishing point source category (40 CFR Part 433).

In the 2014 Effluent Guidelines Program Plan, EAD identified several industrial categories or pollutant groups for which more detailed evaluation is needed to determine if new or revised effluent guidelines are warranted. One of the industrial categories highlighted for further study was the Metal Finishing industry. The Metal Finishing category is covered under an existing pretreatment standard (40 CFR Part 433) and was reviewed as part of the Metal Products and Machinery (MP&M) Effluent Guidelines rulemaking. At the time, EAD determined that revised guidelines were not necessary, but changes in industry practices and categorical scope that have occurred since the MP&M rule are prompting the Agency to revisit this determination. Specifically, EAD determined that further review of this industry was warranted to understand: (1) potential new, unregulated pollutants of concern that are being used more commonly in metal finishing processes; (2) the prevalence of potential pollutants of concern associated with wastewater generated from the use of wet air pollution control devices at metal finishing operations; (3) the availability and use of advanced wastewater treatment technologies; and (4) the prevalence of zero discharge practices in the industry. EAD intends to assess changes that have occurred in the metal finishing chemistry which may result in changes in pollutant discharge characteristics. EAD intends to develop an industry economic profile to determine if the economic changes are sufficient to warrant revision of the regulation of the industry.

EAD is also interested in exploring options for conducting an economic screening of industries to supplement the Integrated Compliance Information System National Pollutant Discharge Elimination System (ICIS-NPDES) and Toxic Release Inventory (TRI) screening for pollutant discharges. For this purpose, the contractor shall develop a concept paper describing potential methodologies and data sources that could be used as a screening tool.

### **Task 1: Prepare Work Plan and Cost Estimates**

The contractor shall prepare the work plan and cost estimates for the tasks below. The workplan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, a detailed cost estimate by task, and a staffing plan. The EPA WACOR, the Contract Level Contracting Officer Representative (CL-COR) and the Contracting Officer (CO) will review the workplan. However, only the CO can approve/disapprove, suggest revisions, or change the workplan. Official revisions will be given to the contractor by the CO. The contractor shall prepare a revised workplan incorporating the CO's comments, if required.

### **Task 2: Prepare a Supplementary Quality Assurance Project Plan (SQAPP) if Needed for Literature Review, Data Collection and Analyses**

The EPA WACOR has determined that the project level QAPP (PQAPP July 31, 2014) is sufficient for this work assignment (see the table 1-2 at the end of the work assignment) for the literature review, data collection, and analyses to be conducted under this work assignment. The contractor shall use the contract level QAPP. However, the contractor shall submit a supplementary QAPP if it is found to be lacking in addressing quality needs of certain elements of this work assignment. The quality assurance plan shall include procedures to assess the quality of primary and secondary data and models. The quality assurance plan shall also include a process for documenting the quality of both primary and secondary data used in the economic

profile of the metal finishing industry. The quality of data shall be analyzed from the perspective of developing an economic profile that can be used to support the Agency's decision-making process with respect to revising the effluent guidelines. Specifically, the quality assurance plan shall include procedures to assess factors or variables, such as revenue, cost and profits, size of the firms, wastewater flow, and treatment technology required for the economic profile of the metal fishing industry. The following provides the details of the quality assurance plan.

## Quality Assurance

### 2.1 Background

Quality Assurance Project Plans are required under the Agency's Quality Assurance Policy CIO-2105, formerly EPA Order 5360.1A2 and implementing guidance CIO-2105-P-01-0. All projects that involve the generation, collection, analysis and use of environmental data must have an approved Quality Assurance Project Plan (QAPP) in place prior to the commencement of the work. Examples of these environmental data operations are provided in Table 1-1 below.

**Table 1-1. Examples of work that involves the collection, generation, evaluation, analysis, or use of environmental data.**

Item	Examples
Data	Includes field sampling information (sample location information, flow measurements, temperature, pH, physical observations, etc.), laboratory measurements (e.g., chemical, physical, biological, radiological measurements), data collected from questionnaires, economic data, census data, and any other types of existing data (i.e., data generated for a different purpose or generated by a different organization)
Data generation	Includes field studies, laboratory studies, and generation of modeling output
Data collection	Includes field surveys, questionnaire surveys, literature searches, and third party data
Data evaluation	Includes data inspection, review, assessment, and validation
Data analysis	Includes statistical, engineering, and economic analysis, and testing, evaluation, and validation of methods and models; database creation, data extraction and data manipulation
Data Use	Any use of data to support EPA decisions, regulations, policy, publications, or tools (including effluent guidelines, 304(m) program, standards, environmental assessments, and models, tools, or reports disseminated by EPA to assist other organizations in implementing environmental programs)

Note, this work assignment does not anticipate development of new software or models in order to prepare an economic profile of the metal finishing industry and developing a concept paper for making a determination for further studying industries including the metal finishing industry. As result, the quality assurance plan does not require development or revision of models and software that support the generation, collection, evaluation, analysis, or use of data. (A model is set of equations and assumptions used to predict unknown data.) When existing models are used as a tool to generate or evaluate data, the project QAPP must describe the model and explain how it will be used and how its output will be evaluated to ensure the modeling effort meets the overall quality objectives for the project. However, as stated before, this work assignment does not anticipate use of models, only the use of existing databases.

### 2.2 QA Project Plan Requirements

The contractor has previously prepared a contract-wide Programmatic QAPP (PQAPP) for Contract EP-C-13-039. This PQAPP describes, in a single document, information that is not site or time-specific, but applies throughout the program (i.e., the duration of the contract). When tasked with preparing the PQAPP, the contractor was informed that the PQAPP may need to be supplemented with project-specific details to support individual work assignments that involve the collection, generation, evaluation, analysis, or use of environmental data.

The activities in this work assignment involve gathering, evaluating, analyzing, and otherwise using only existing environmental data (also known as “secondary” use of data). However, EPA has determined that the contractor is operating under the existing PQAPP and that the PQAPP addresses QA requirements for this work assignment. Therefore, no new quality assurance project plan for this work assignment is required. However, if additional need arises with respect to new data, the contractor shall discuss with the EPA WACOR to determine the adequacy of the quality of the data and the need for a supplementary QAPP. In support of this work assignment, the contractor shall ensure that the work plan provides enough detail to clearly describe:

- Specific objectives of the project(s) supported by this work assignment, including typical questions that must be answered when using existing sources of data to perform economic analyses in order to make the determination about revising the metal finishing industry effluent guidelines.
- The type of data to be gathered or used under this work assignment to support the project objectives—including data from industry, federal and state databases, EPA data bases, letters from industry—as a well as a rationale for when those sources are appropriate and what data available in each will support the project;
- The quality objectives needed to ensure the data will support the project objectives, and
- The QA/QC activities to be performed to ensure that any results obtained are documented and are of the type, quality, transparency, and reproducibility needed.

Table 1-2 at the end of this WA demonstrates how the PQAPP addresses QA requirements for this work assignment. The contractor shall fill in staff roles to the Table 1-2 under A.4 and make any additional detailed notes in the ‘explanatory comments’ column as requested by the WACOR. The contractor shall then include the completed Table 1-2 as a separate Appendix A to the workplan upon submittal to EPA. This Appendix A should be a stand-alone document if QA documentation is requested, therefore the Table 1-2 title must include the title of the WA, WA number, contract number, and what projects each covers. The WACOR has provided this information in the title, which the contractor may use to fulfill this requirement.

### ***2.3 Additional QA Documentation Required***

The EPA Quality Manual for Environmental Programs (CIO 2105-P-01-0, May 2000) requires published Agency reports containing environmental data to be accompanied by a readily identifiable section or appendix that discusses the quality of the data and any limitations on the use of the data with respect to their originally intended application. The EPA Quality Manual further requires Agency reports to be reviewed by the QA manager (or other authorized official) before publication to ensure that an adequate discussion of QA and QC activities is included. The purpose of the review is to ensure the reports provide enough information to enable a

knowledgeable reader to determine if the technical and quality goals were met for the intended use of the data. Reports should include applicable statements regarding the use of any environmental data presented as a caution about possible misuse of the data for other purposes. For example, a technical support document or study report must include a clear discussion of the quality management strategies (including the project goals and objectives, quality objectives and criteria, and QA/QC practices) that were employed to control and document the quality of data generated and used. These documents should also discuss any deviations from procedures documented in the EPA-approved QAPP(s) supporting the project, the reasons for those deviations, any impact of those deviations had on data quality, and steps taken to mitigate data quality issues.

In support of this Agency requirement, all major deliverables such as regulated entities (point and nonpoint sources), and technology cost estimates produced by the contractor under this work assignment must include a discussion of the QA/QC activities that were performed to support the deliverable, and this discussion must provide a sufficient level of detail to allow the EAD QA Coordinator (or designee) to determine if the QA/QC strategies implemented for the project sufficiently support the intended use of the data. Upon receipt, the EPA WACOR will review each applicable report and certify whether the contractor has adhered to the QA requirements documented in the contractor's PQAPP.

The contractor also shall provide EPA with monthly reports of QA activities performed during implementation of this work assignment. These monthly QA reports shall identify QA activities performed to support implementation of this work assignment, problems encountered, deviations from the QAPP, and corrective actions taken. If desired, the contractor may include this as a part of the contract-required monthly financial/technical progress report.

#### ***2.4 Data Quality Act/Information Quality Guidelines Requirements***

The Data Quality Act (also known as the Information Quality Act) requires EPA to ensure that influential information disseminated by the Agency is sufficiently transparent in terms of data and methods of analysis that the information is capable of being substantially reproduced. To support compliance with these data transparency/data reproducibility requirements, EPA plans to include QAPPs as part of any rulemaking record documentation to be made available to the public. (This includes PQAPPs and SQAPPs.) The contractor may claim information in QAPPs as confidential; if the contractor chooses to do so, the contractor shall submit a sanitized (i.e., public) version and an unsanitized (i.e., confidential) version at the time the QAPP is submitted for approval by EPA. The sanitized version shall be included in the public docket for the applicable rulemaking (or other docket record), and the unsanitized version shall be included in a non-public (i.e., confidential) portion of the docket (or record).

Information contained in the approved QAPP shall be transparent and reproducible and meet the requirements of the Data Quality Act for influential information. EPA's *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Environmental Protection Agency* (EPA/260R-02-008, October 2002), referred to as "EPA's Information Quality Guidelines," describe EPA procedures for meeting Data Quality Act requirements. Section 6.3 of EPA's Information Quality Guidelines indicate that "especially rigorous robustness checks" should be applied in circumstances where quality-

related information cannot be disclosed due to confidentiality issues. Where applicable, the Contractors shall indicate which results were obtained using the tools (SOPs, checklists, and guidelines) that the contractor designates as confidential so that the EPA WACOR can easily identify the areas that shall require rigorous robustness checks and document that those checks have been performed. At the discretion of the EPA WACOR, the contractors may be requested to prepare pre-dissemination review checklist as described in Appendix B of the Office of Water Quality Management Plan, April, 2015. If this is required, the EPA WACOR will notify the contractor. The contractor shall provide the monthly QA reports and deliverables as requested by the WACOR.

### **TASK 3: Economic Study of the Metal Finishing Industry**

To prepare the economic profile of the metal finishing industry, the contractor shall compile information about the number of establishments and their location in the United States. The contractor shall gather the time series data about cost, revenue, profits, shipments, imports, exports of firms/establishments. The contractor shall determine the trend, present projections (if available), and analyze the impact of foreign competition on the industry over time. The contractor shall gather information about the size of the firm, full time and part time employment and the labor share cost of the establishment. The contractor shall gather ownership data of the establishments and the market characteristics. The contractor shall also get information about the type of technology used by the metal finishing facilities, if readily available with the economic data, although it is not required to collect it separately. The contractor may get the information about the water treatment technology used by an establishment if readily available in economic documents but is not required to do so. In addition to the above mentioned data, the contractor shall gather any other information that is deemed relevant to making the determination of the revision of the effluent guidelines (such as pollutants of concern if readily available and the impact of regulations on the industry). The contractor shall use publically available sources of the information including buying data from others such as investment firms (non-license and non-proprietary data). It should use the data gathered by the waste water treatment facilities about the indirect dischargers. Possible sources of data could include, but are not limited to, industrial census, annual surveys, publically owned treatment works, trade associations, States (such as Virginia), permits and the analyses for National Emission Standards for Hazardous Air Pollutants (Chromium Electroplating and Area Source Standards for Nine Metal Fabrication and Finishing Source Categories).

The contractor shall provide deliverables on WACOR's request. For planning purposes, the contractor shall assume that it will be required to deliver two memos in advance of the first draft of the economic study regarding the data collections and analysis described in the previous paragraph. The contractor shall present the first draft of the economic study itself by May 31, 2016. The contractor shall revise the report to address EPA's comments if any. The contractor may be asked to participate in conference calls about this economic profile study.

### **TASK 4: Screening Study**

The contractor shall develop a concept paper describing various economic methodologies, using economic data, as a tool for screening point source manufacturing



industries for further study. The paper shall discuss the pros and cons of each option including the most preferred option that could be adopted as a screening tool. The concept paper may include an application (if easy, although not strictly required) based on the industry data that demonstrates the utility of the screening methodology. The contractor shall include the data if used in the screening study. The contractor shall prepare a short concept paper not exceeding 10 to 15 pages and delivered by March 31, 2016.

## **PERFORMANCE STANDARDS AND QUALITY MEASURES:**

The following standards will be used to measure performance:

- 1) **Quality of Outputs** - All tasks to be of superior quality as to its financial analysis provided to EPA with respect to effluent guidelines. The quality of outputs will be measured against similar analyses and work products already performed by this contractor for EPA. These include the costs methodology, and supporting documentation and analyses for effluent guidelines.
- 2) **Timeliness** - All tasks are to be completed on or ahead of schedule as measured against the schedule set for this work assignment
- 3) **Ingenuity and Resourcefulness** - New issues are addressed using innovative analyses. Ingenuity and resourcefulness will be measured by the ability to use innovative analyses to address new issues not previously identified in the analyses conducted for the effluent guidelines in the area of metal products and machinery, including metal finishing.
- 4) **Quality Assurance** - All work is to adhere to the Quality Assurance Project Plan for the contract (PQAPP).

## **Deliverables and Schedule**

Deliverables due dates shall be suitable for the timelines noted for each project, i.e., the contractor shall contact the WACOR on the timelines that each economic analysis is needed to be complete in order to fit within the schedule of each project.

<b>Tasks</b>	<b>Schedule</b>
<b>Task 1:</b> Prepare Work Plan and Cost Estimates	Within Fifteen calendar days after receipt of the work assignment.
<b>Task 2:</b> Prepare a Supplementary Quality Assurance Project Plan (SQAPP) if Needed for Literature Review, Data Collection and Analyses	Fifteen days after the work assignment.
<b>Task 3:</b> Economic Study of the Metal Finishing Industry	Monthly updates or at WACOR's request; first draft of economic study by May 31, 2016.



<b>Task 4:</b> Screening Study	March 31, 2016.
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## V. TRAVEL

Travel will not be needed to complete this Work Assignment.

## VI. QUALITY ASSURANCE PROJECT PLAN ELEMENTS

Table 1-2. Quality Assurance Project Plans (QAPP) Elements Applicable to WA 2-42 Economic Study of the Metal Finishing Industry and screening study (task 3), contract number EP-C-13-039

QAPP Element	Sufficiently Addressed in PQAPP	Address in SQAPP	Not Applicable to Project	Explanatory Comments
<b>A1. Title &amp; Approval Sheet</b>				
Economic Profile of the Metal Finishing Industry and Screening Study of Industries	X			Gathering data for preparing an economic profile of metal finishing industry and developing a concept paper about screening methodology for making the decision to further study industries also including metal finishing.
Organization's name	X			Abt Associates
Effective date and/or version identifier	X			Page ii of PQAPP, July 2014
Dated signature of Organization's project manager	X			page ii of PQAPP, July 2014
Dated signature of Organization's QA manager	X			page ii of PQAPP
Other signatures, as needed (e.g., EAD Project Officer, EAD QA Coordinator)	X			page iii of PQAPP
Revision History	X			page i of PQAPP
<b>A2. Table of Contents</b>				
Includes sections, figures, tables, references, and appendices	X			page vii of PQAPP
Document control information indicated (when required by the EPA Project Manager and QA Manager)	X			Page ii et seq of PQAPP
<b>A3. Distribution List</b>				
Includes all individuals who are to implement or otherwise receive the QAPP and identifies their organization	X			Section 2.1 of PQAPP; pages 5-7, section iV
<b>A4. Project/Task Organization</b>				
Identifies key individuals with their responsibilities (e.g., data users, decision makers, project QA manager, Subcontractors, etc.) and contact info.	X			Reference PQAPP section 2.1 on page 5. Referencing table 2.1 and descriptions on page 7-9 of PQAPP. Specific people identified for the following roles: PQA: Abt WAM: OST WACOR: Ghulam Ali
Organization chart shows lines of authority & reporting responsibilities	X			Reference PQAPP section 2.1 for overall picture
Project QA manager position indicates independence from unit collecting/using data	X			Reference PQAPP section 2.1 on page 6(table 2-1).

QAPP Element	Sufficiently Addressed in PQAPP	Address in SQAPP	Not Applicable to Project	Explanatory Comments
<b>A5. Problem Definition/Background</b>				
Clearly states problem to be resolved, decision to be made, or hypothesis to be tested	X			PQAPP Section 2.2 – The problem to be addressed involves making a determination as to whether or not to study the industry further. Specifically, Table 2.2 (industry profiles) identifies the economic and financial conditions.
Identifies project objectives or goals	X			Reference PQAPP Table 2.2 (i.e. industry profile)
Historical & background information			X	
Cites applicable technical, regulatory, or program-specific quality standards, criteria, or objectives	X			Section 2.4: Compile and describe data on facilities and entities that have the potential to be regulated further
<b>A6. Project/Task Description</b>				
List measurements to be made/data to obtain	X			See bulleted list in section 2.3 of PQAPP
Notes special personnel or equipment requirements			X	
Provides work schedule			X	Addressed in work plan
<b>A7. Overall Quality Objectives &amp; Criteria</b>				
States overall quality objectives and limits needed to support the project goals and objectives cited in A5	X			Section 2.4 of PQAPP (starting page 16).
<b>A8. Special Training Requirements/ Certifications</b>				
Identifies specialized skills, training or certification requirements	X			section 2.5 of PQAPP, sufficient
Discusses how this training will be provided/the necessary skills will be assured and documented	X			section 2.5 of PQAPP, sufficient
<b>A9. Project-level Documents &amp; Records</b>				
Describes process for distributing the approved QAPP and other planning documents (and updates) to staff	X			Section 2 of PQAPP, pages 7
Identifies final work products that will result from the project	X			Section 2.6 of PQAPP
Describes the process for developing, reviewing, approving, and disseminating the final work products and individuals responsible for these processes	X			See Appendix A, 2.4.2 and 2.6 deliverables and Table 2-4 of PQAPP
<b>B1. Data Needs</b>				
Detailed list/description of the specific data elements needed to support project goals	X			See Table 3-1 of PQAPP headings: Industry Financial Data, page 33.
Description of the scope of the data elements that you need (e.g., data supporting specific treatment options vs. the full range of options, data supporting the entire country vs. a specific geographic region)	X			See Table 3-1 of PQAPP headings: Industry Financial Data, and section 3.1.3 (Data Sets), page 45.
If project includes development or update of a project database, QAPP identifies and defines each database field			X	No updating of databases is expected.